STATE FOREST LAND
ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/ watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered " does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

   *Timber Sale Name:***HOKO RIDGE** *Agreement #:* 30-0**76293**

2. Name of applicant: **Department of Natural Resources**

3. Address and phone number of applicant and contact person:
   Michael Potter
   411 Tillicum Lane
   Forks, WA 98331
   360-374-6131

4. Date checklist prepared: **09/13/2004**

5. Agency requesting checklist: **Department of Natural Resources**

6. Proposed timing or schedule (including phasing, if applicable):

   a. *Auction Date:* **02/15/2005**
   b. *Planned contract end date (but may be extended):***2/01/2007**
   c. *Phasing:***Not applicable**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   Timber Sale

   a. *Site preparation:* **Landings may be burned upon completion of logging.**

   b. *Regeneration Method:* **Hand planting**

   c. *Vegetation Management:* **Needs will be assessed 5-7 years after harvest.**

   d. *Thinning:* **Needs will be assessed 10-12 years after harvest**

   Roads: **None anticipated**

   Rock Pits and/or Sale: **Hermie Pit developement**

   Other: **Units may be opened for firewood salvage or other minor forest products.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

✔ *303 (d) – listed water body in WAU:* ✔ **temp** ☐*sediment* ☐*completed TMDL (total maximum daily load):*
☐*Landscape plan:*
✔ *Watershed analysis:***Hoko Watershed Analysis, WRIA # 19**
☐*Interdisciplinary team (ID Team) report:*
✔ *Road design plan:* **Hoko Ridge Road Plan**
☐*Wildlife report:*
☐*Geotechnical report:*
☐*Other specialist report(s):*
☐*Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*
✔ *Rock pit plan:* **Hermie Pit (included in road plan)**
☐ *Other:*
All documents may be obtained at the Olympic Region Office during the SEPA comment period.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.
Not Applicable

10. List any government approvals or permits that will be needed for your proposal, if known.

✔ **HPA** ✔ **Burning permit** ☐*Shoreline permit* ✔ **Incidental take permit** ✔ *Other:***Board of Natural Resources Approval**

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. Complete proposal description:

The proposed Hoko Ridge Timber Sale is located approximately 18 road miles southwest of Clallam Bay, Washington off the Hoko-Ozette County Road on the CZ-5900 forest road system. It is located within the Olympic Experimental State Forest (OESF) and the Hoko Watershed Administrative Unit (WAU). Unit 1 is designated Agricultural School and Capitol trustlands and is legally described as T30N R13W Sec. 4 and 5. Unit 2 benefits the Capitol Building trust and is legally described as T31N R13W Sec. 21. This proposed regeneration harvest will produce approximately 3.63 MMBF of second-growth conifer and hardwood timber for the two trusts. This proposal encompasses approximately 130.4 acres. Unit 1 is approximately 94.3 acres in size. Of this, 57.2 acres is designated regeneration harvest, 2.0 acres in Green Tree Retention (GTR) and 35.1 acres have been left in Riparian Management Zones (RMZ), Riparian Leave Areas (RLA)and protection of unstable slopes. Unit 2 is approximately 40.8 acres in size. Of this, 25.1 acres is regeneration harvest, 3.0 acres in GTR, 12.7 acres have been left in RMZ, RLA and unstable slope protection.

Both units are a hilly, rolling landscape. Several draws are present in both units. Most of these draws were tagged out of the proposed harvest area for RMZ/RLA protection or potential instability issues.

This proposal is located in an area surrounded by private industrial forestland ownership, with some scattered DNR ownership present. The surrounding areas see very little public use as private industrial owners gate the road systems in this area. This proposal will construct approximately 6,895' of new forest roads and reconstruct 1,553' of existing road. Seven miles of pre-haul maintenance on the CZ-5900, CZ-5920 and the CZ-5920.5 roads will be purchaser's responsibility and will consist of grading and shaping.

b. Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.

<u>*Pre-harvest Stand Description*</u>

The unit's naturally regenerated second-growth timber primarily consists of mixed-quality 70 year-old western hemlock with elements of Sitka spruce, red alder, Douglas fir, and western redcedar scattered throughout the units.

<u>*Logging Methods*</u>

The proposed harvest will utilize a combination of cable yarding and shovel logging methods. Lateral yarding capabilities will be required for portions of the sale to minimize damage to residual leave trees throughout the sale.

<u>*Overall Unit Objectives*</u>

Objectives for this proposal are to provide financial benefit to the two trusts under the guidelines provided by Forest Practice rules, DNR's Habitat Conservation Plan (HCP) and the Hoko Watershed Analysis. Specific objectives include riparian protection, green tree retention plan, protection of soils and unstable slopes and procedures pertaining to threatened and endangered species.

Riparian protection measures were designed for all waters in and adjacent to this proposal in accordance with DNR's OESF Riparian strategy and the Hoko Watershed Analysis (See details in section 3.a.1)c)).

An average of eight trees per acre have been left aggregated and dispersed throughout the proposed units with a total of 735 trees being left throughout the sale area. Large, structurally unique trees and snag recruitment trees were chosen for individual retention as well as exposed windfirm trees along windward edges of the stands. Unit 1 has 218 dispersed leave trees marked with blue bands. Unit 2 has 179 dispersed leave trees which are marked in the same manner as Unit 1. Three GTR clumps have been designated within Unit 1 and a total of 286 trees were left in these clumps. Two GTR clumps have been designated within Unit 2 and contain 52 trees total. These areas have been tagged out with "Leave Tree Area" tags. These marked leave trees and leave tree clumps will expedite the development of a more diverse, multi-storied canopy layer in the future stand.

c. Road activity summary. See also forest practice application (FPA) for maps and more details.

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		**6,895**	**1.9**	**0**
Reconstruction		**1,553**		**0**
Abandonment		**0**	**0**	**0**
Bridge Install/Replace	**0**			**0**
Culvert Install/Replace (fish)	**0**			**0**
Culvert Install/Replace (no fish)	**19**			

Rock will come from Hermie Pit located on-site at the north end of Unit 2 or may be obtained from an approved commercial source. A RUP has been obtained from Crown-Pacific for use of the CZ-5900 road system for this project as described in road plan.

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. *(See timber sale map. See also color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

a. Legal description:

Unit 1 T30N R13W Sections 4 & 5
Unit 2 T31N R13W Section 21

b. Distance and direction from nearest town (include road names):

From Clallam Bay, WA, go 4.2 miles east on State Route 112 to Hoko-Ozette County Road. Head south on the Hoko-Ozette Rd. approximately 8.6 miles to the CZ-5900 Forest Road. This is a privately owned road system and the gate can be closed at any time. Follow th CZ-5900 road approximately 3.0 miles to a junction with the CZ-5920 road. Unit 1 is 2.2 miles from this junction on the CZ-5900 and Unit 2 is 1.5 miles from this junction on the CZ-5920 road.

c. Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")

WAU Name	WAU Acres	Proposal Acres
HOKO	57656	130.4

13. Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)

This proposal is located within the Hoko WAU, which has a completed watershed analysis. The watershed analysis found issues with mass wasting, unstable slopes, sediment delivery to streams and lack of large woody debris in fish bearing waters. This proposal is also located within the boundaries of the Olympic Experimental State Forest, which has specific riparian, spotted owl and marbled murrelet conservation strategies under the DNR's Habitat Conservation Plan (HCP). The HCP requires the department to manage landscapes with the intent to preserve and enhance habitat used by fish and older-forest dependent species. This agreement substantially helps the department to mitigate for any potential harmful cumulative effects related to its management activities. The HCP is designed to protect and promote fish and wildlife species and their habitats over a broad regional area. The applicable HCP strategies incorporated into this proposal are as follows:

- **Retaining Riparian Management Zones (RMZ 's) on all streams,**
- **Deferring harvest on unstable slopes,**
- **Retaining a minimum of 8 leave trees per acre dispersed and aggregated throughout the units,**
- **Designing, constructing, and maintaining a road system to minimize potential adverse effects on the environment.**
- **Procedures pertaining to threatened and endangered species.**

By applying these strategies required under the DNR's Habitat Conservation Plan, this proposal meets or exceeds the recommended prescriptions of the Hoko Watershed Analysis thereby minimizing cumulative effects to the watershed.

Several measures have been taken to ensure that this proposal will not contribute to adverse environmental impacts through cumulative effects. In 2002 Wendi Gerstal, a DNR consulting geologist, visited the proposed units to assess areas of potential instabilities. As per Wendi's recommendations, a 60-acre unit with several potential areas of instability was dropped from the project, and boundary adjustments were made on Unit's 1 and 2 to mitigate other potentially unstable draws and streams. Most of the RMZs and RLAs were widened beyond the required width to incorporate the potentially unstable ground identified in Wendi's visit. Approximately 43.1 acres of the original proposal were tagged out of the sale for riparian and slope stability protection. There will be no harvest activities within any of the RMZ's or RLA's associated with this proposal, which will protect water quality, stream bank integrity and soils. Furthermore, the RMZ's and RLA's will develop old-forest characteristics that, in combination with other strategies, will help support old-forest dependant wildlife populations in the future.

The Hoko WAU has mixed forestland ownership with the major landowners being Crown Pacific and Rayonier Timberlands. The DNR has scattered forestland throughout the WAU as well. The lowlands of the WAU see some use from both small private residential uses to small agricultural uses. Most of these areas are concentrated along the Hoko River Valley and along the Straits of Juan de Fuca, which is located along the northern boundary of the WAU. There are 57,656 acres in the Hoko WAU, of which DNR manages 11,160 acres, or about 19% of the WAU. State Parks manages 1.5%, the United States Forest Service, Bureau of Land Management, and Department of Corrections each manage less than 1%, and the rest, approximately 78.5% of the WAU is presumably in private ownership.

Over the past 5 – 10 years private industrial forestlands within the WAU have reached rotation age and are currently being harvested on an estimated rotation age of 40 – 50 years in accordance with Forest Practice rules and watershed analysis prescriptions. The majority of these private lands are on their second or third rotation. Within the past seven years there have been approximately 600 acres of harvest on DNR lands within the WAU. This equates to approximately 1 % of the total DNR land base within the WAU.

There are presently four sold sales within the Hoko WAU.

- **Herbie timber sale has 11.2 acres within the WAU, and is located along the eastern edge of the WAU. Herbie is presently being harvested.**
- **Bucksnort timber sale Units 1, 2 and 3 are within the Hoko WAU and are located along the western edge of the WAU. The three units emcompass 51.5 acres and have been harvested.**
- **Dickey Mountain Alder sale is split between the Hoko WAU and the East Dickey WAU. The portion of this sale located along the southwestern edge of the Hoko WAU is approximately 60 acres. This sale is presently being harvested.**
- **Section 4 40 timbersale has just been sold. It contains 37.9 harvestable acres. The unit is in the southeastern region of the WAU.**

Lands adjacent to Unit 1 are of mixed ownership. Directly north of the unit are two plantations. The 6 to 8 year-old plantation is owned by Crown Pacific and the 5 to 7 year-old plantation is owned by Rayonier. To the east and west of the unit

is DNR managed lands which are part of the RMZ acres removed from the original harvest acres for riparian and slope stability protection. Further west of the unit is a 60 acre unit that was to be part of the original Hoko Ridge proposal, but was deferred from harvest at the geologist's recommendation. Unit 1 is bounded to the south by 50-year plus Raynonier timberland.

Unit 2 is bounded by both DNR and Crown Pacific lands. To the north is state ownership consisting of an RMZ/RLA buffer and 40 year-old timber beyond the buffer. Directly to the east is the Type 3 RMZ for Herman Creek and beyond the creek is 40 year-old state owned timber. There are no plans at this time to harvest to the north or east of the unit. Crown Pacific owns the land to the south and west of the unit and this all has been harvested in the last three years.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☐Rolling, ✔ Hilly, ☐Steep Slopes, ☐Mountainous, ☐Other:

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).
The Hoko WAU is generally moderate terrain with an elevation range of 0' to 2654' with the average being 702'. The WAU is comprised of both state owned and large private industrial forestlands, with the industrial ownerships being the prevalent landowners. The lower elevations of the WAU along the Hoko River Valley sees a fair amount of rural residential uses as well as a minor amount of small agricultural uses. The average precipitation in the WAU is approximately 120". The major timber type in the WAU is Western hemlock with Douglas fir being second.

2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).
The proposal is very similar to the general description of the WAU. Elevation of the units is between 400 and 700 feet.

b. What is the steepest slope on the site (approximate percent slope)?
It is approximately 60% on approximately 10% of the harvest acres.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

State Soil Survey #	Soil Texture or Soil Complex Name	% Slope	Acres	Mass Wasting Potential	Erosion Potential
5733	OZETTE-SILT LOAM	5-35	85	LOW	LOW
7421	SNAHOPISH-V.GRAVELLY LOAM	35-70	47	MEDIUM	HIGH
5734	OZETTE-ANDEPTIC UDORTHENTS-COMPLEX	50-80	3	No Data	No Data

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. **Yes, the Hoko Watershed Analysis identified several areas of potential shallow-rapid instabilities and erosive soils throughout the watershed. The Snahopish-Very gravelly loam soils are found in 47 acres of the original proposal and have been identified as highly erosive on slopes greater then 35%.**

1) Surface indications: **Deep incised draws, and steep head-walls with live water are some very consistent indicators of potential instability and erosion issues.**

2) Is there evidence of natural slope failures in the sub-basin(s)?

☐*No* ✔ *Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:* **Within the upper reaches of the Hoko WAU there are areas of shallow landslides and mass wasting. These are mainly associated with steep incised stream channels and headwall areas.**

3) Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?

☐*No* ✔ *Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:* **There are areas within this WAU where shallow slope failures have occurred.**
Associated management activity: **These are mainly associated with past road construction or harvest activities on steep, unstable terrain.**

4) Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?

☐*No* ✔ *Yes, describe similarities between the conditions and activities on these sites:* **The deeply incised streams and the erosive soils found in the proposal area are very similar to areas where previous slope failures have occured.**

5) Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal. **The proposal's RMZ buffers meet or excced the required buffer width under the HCP to mitigate the potential mass-wasting issues that were identified in the Hoko Watershed Analysis and the consulting geologist. Approximately 32% of the original proposed acres have been left in RMZ/RLA buffers for riparian and slope protection.**

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approximately 7.2 miles of grading will be required as part of the pre-haul maintenance on the CZ-5900, CZ-5920 and the CZ-5920.5 roads.

Approx. acreage new roads: **1.9** *Approx. acreage new landings:* **0.5** *Fill source:*

e. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. **Yes. A small amount of incidental surface erosion could occur during the course of road construction and harvest activities. However, prudent road location, construction, and maintenance, as well as the mitigating measures outlined in question h. below will minimize and control any possible erosion.**

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):* **Less than 2% of the proposed acres will be in permanent gravel roads.**

h. Propose measures to reduce or control erosion, or other impacts to the earth, if any: *(Include protection measures for minimizing compaction or rutting.)* **Road construction and rock haul will be restricted from November 1 through April 30 to minimize siltation of ditch water and reduce rutting of road surfaces. Harvest systems were chosen that would minimize soil compaction and rutting. Well-placed drainage structures and correctly constructed ditches will help to minimize erosion of the freshly exposed soils. Timely grass seeding of exposed slopes will help to reduce soil erosion.**

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust *from truck traffic, rock mining, crushing or hauling,* automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known. **Dust and exhaust from equipment used for rock haul, log haul, pit work, road construction and harvest activities will be present during the project. After the project there may be smoke from burning of slash piles. Smoke will be regulated through the DNR's smoke management plan.**

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. **No**

c. Proposed measures to reduce or control emissions or other impacts to air, if any: **None**

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. *(See timber sale map and forest practice base maps.)* **Yes.**

a) Downstream water bodies: **Hoko River and Straits of Juan de Fuca**

b) Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Unnamed Type 5	**5**	**9**	**25 feet or greater**
Unnamed Type 4	**4**	**3**	**100 feet or greater**
Herman Creek	**3**	**1**	**150 feet or greater**
Unnamed Type 3	**3**	**4**	**150 feet or greater**
Hoko River	**1**	**1**	**200 feet or greater**

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.

Riparian protection measures were designed for all waters in and adjacent to this proposal in accordance with DNR's OESF Riparian strategy, the Habitat Conservation Plan and the Hoko Watershed Analysis. Our protection of potential slope instability and our HCP Riparian Procedures have met or exceeded the prescriptions of the Hoko Watershed Analysis.

Unit 1 has several streams associated with it. The Hoko River is approximately 200 feet from the northeast corner of the unit. This is a Type 1 waterway and was buffered with a 200-foot RMZ. This corner of the unit is planned to be cable yarded from the top which should also help to minimize impacts to the river. With the protection measures taken on the other associated streams mentioned below, the impact to the Hoko River should be minimal throughout all phases of the proposed harvest.

There are two Type 3 streams associated with Unit 1. Both of these were bounded out of the harvest area by a 150-foot or greater riparian management zone (RMZ) to minimize impacts to the waterways and to protect possible areas of instability. These RMZs encompass approximately 19.2 acres.

One Type 4 and six Type 5 streams are also associated with this unit. The Type 4 stream was buffered with a 100 foot RMZ, which is approximately 3.7 acres in size. The Type 5 streams found within this proposal are found in areas of potential slope instability and were incorporated into our unstable slope protection or were incorporated into designated leave tree areas. The approximate size of these areas is 11.2 acres. Unit 2 also has several streams associated with it. Two Type 3 streams run adjacent to the harvest area and a RMZ buffer of 150-feet or greater has been applied to mitigate any possible riparian or instability issues. The Type 3 RMZ is approximately 6.2 acres. Two Type 4 streams have been protected with 100-foot or greater RMZ totaling approximately 4.0 acres. One acre has been left for Type 5 protection and approximately 1.5 acres have been left for unstable slope protection.

Well designed roads, 19 new culverts installed, grass seeding of freshly exposed soils and seasonal restrictions on road construction activities will also help to minimize impacts to the riparian areas associated with this project.

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.

☐ *No* ✔ *Yes (See RMZ/WMZ table above and timber sale map.)*

Description (include culverts): **See section 1.c. above.**

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. *(Include diversions for fish-passage culvert installation.)*

✔ *No* ☐*Yes, description:*

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

✔ *No* ☐*Yes, describe location:*

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

✔ *No* ☐*Yes, type and volume:*

7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?

Approximately 50% of the Hoko WAU has a high soil erosion potential and 4% has a high mass wasting potential. The high mass wasting potential areas are located along the coastal strip and some of the larger tributaries. The high soil erosion potential areas are located throughout the WAU. Since the erosion is caused by high water and/or rain-on-snow events, the eroded material would likely enter surface waters. The potential for eroded material to enter surface water based on this proposal is low due to the control measures being included in the proposal (see B.1.h.).

8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?

☐*No* **X** *Yes, describe changes and possible causes:* **There is evidence of surface erosion throughout the WAU and mass wasting along some of the steeper headwalls and incised channels. Elevated streambeds attributed to accelerated aggradations of sediment in the channels are the main indicator of channel changes in the WAU. The watershed analysis also shows a general decrease in the amount of LWD in streams that were not buffered during past harvest activities. Where the stream banks erode or headwalls fail, as described above, the channels may change dimension and/or direction over time.**

9) Could this proposal affect water quality based on the answers to the questions 1-8 above?

☐*No* ✔ *Yes, explain:* **This proposal is expected to have minimal to no effect on water quality. The Riparian Management Zones and Riparian Leave Areas left adjacent to all streams should maintain stream bank integrity and provide shading. They will also provide for recruitment of LOD into the future. The RMZ/RLA and other items listed in B.1.h.above will minimize sediment delivery to streams.**

10) What are the approximate road miles per square mile in the WAU and sub-basin(s)? ***4.8 miles per section.***
Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?

☐*No* ✔ *Yes, describe:* **No examples can be pinpointed at this time, however it is likely that some roads within the WAU do intercept sub-surface flow and do indeed deliver ditchwater into streams. However in recent years road construction and maintenance practices have addressed this concern and efforts are being made to place ditch water onto stable forest floors.**

11) Is the proposal within a significant rain-on-snow (ROS) zone? If not, ***STOP HERE*** *and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*

✔ *No* ☐*Yes, approximate percent of WAU in significant ROS zone.*
Approximate percent of sub-basin(s):

12) If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?

13) Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?

☐*No* ✔ *Yes, describe observations:* **As described above, some of the larger stream banks can erode during periods of high water and steep headwall areas can fail during rain-on-snow events. The mass wasting described in B.1.d.2. above occurs during peak flow events and can result in accelerated sediment aggradations. Lack of LWD can contribute to stream channelization during peak flow events.**

14) Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact. **Although this proposal may contribute to a minimal increase in storm run off during moderate to high rain events, the design of the proposal should mitigate these effects. See question B, 1, h above for mitigation factors applied to this proposal addressing runoff and sedimentation.**

15) Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?

☐*No* ✔ *Yes, possible impacts:* **There is always a possibility of impacts to downstream resources despite mitigation efforts, but all caution was used in RMZ/RLA boundary locations, and road locations to minimize possible effects to downstream resources including residential and agriculture users, and instability concerns.**

16) Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts. **Maintaining large RMZ's on streams that maintain bank stability, hydrologic function, and provide recruitment of LWD. Recent increases in the number and spacing of culverts to divert water to the forest floor. See B.1.h, B.3.a.1.c and A.13 for additional protection measures.**

b. Ground Water:

1) *Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.* **No**

2) *Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.* **Not applicable.**

3) *Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?*
✔ *No* ☐ *Yes, describe:*

a) *Note protection measures, if any.*

c. Water Runoff (including storm water):

1) *Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.*
Storm water on roads will be collected by ditches, ditchouts and cross drains and diverted to stable forest floor where it will follow natural topography.

2) Could waste materials enter ground or surface waters? If so, generally describe. **No.**

a) *Note protection measures, if any.*

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)
Our retention tree plan which is leaving eight wildlife and legacy trees per acre and the riparian buffers left on all streams in and adjacent to the proposal will enhance diversity on the site. The harvest units will be reforested with a mixture of conifer species including western hemlock, Douglas fir and western redcedar all of which are native species to this site.

4. Plants

a. Check or circle types of vegetation found on the site:

✔ **deciduous tree:** ✔ **alder,** ✔ **cottonwood,**
✔ **evergreen tree:** ✔ **Douglas fir,** ✔ **western hemlock,** ✔ **Sitka spruce,** ✔ **red cedar,**
✔ **shrubs:** ✔ **huckleberry,** ✔ **salmonberry,** ✔ **salal,**
✔ **wet soil plants:** ✔ **devil's club,**

b. What kind and amount of vegetation will be removed or altered? *(See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)* **This proposal will be harvesting approximately 3.63 MMBF fo 60-70 year-old conifer and hardwood timber.**

1) *Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")* **Directly north of Unit 1 are two plantations. One is a 6 to 8 year-old plantation with mixed species incuding Douglas fir, western hemlock and Sitka spruce. The other is a 5 to 7 year-old plantation with Douglas fir and western hemlock. To the east and west of the unit is DNR managed lands which are part of the RMZ arces and consist mainly of mature red alder and 60-80 year-old western hemlock with minor components of western redcedar, Douglas fir and Sitka spruce. To the south of Unit 1 is Raynonier timberland. The timber is of harvest age, 40-60 years-old, and mixed species consisting of western hemlock, Douglas fir, red alder, western redcedar and Sitka spruce.**

Unit 2 is bounded by both DNR and Crown Pacific lands. To the north is an RMZ/RLA buffer of approximately 80 years-old western hemlock, mature red alder, and minor components of Douglas fir, western redcedar and Sitka spruce. Beyond the RMZ is a 40 year-old DNR plantation. Species include Douglas fir, western hemlock and Sitka spruce. Directly to the east of the unit is the Type 3 RMZ for Herman Creek consisting of approximately 80 years-old western hemlock, mature red alder, and minor components of Douglas fir, western redcedar and Sitka spruce. Beyond Herman Creek is more 40 year-old state owned timber of mixed species. Crown Pacific owns the land to the south and west of the unit and this all has been harvested and replanted with mixed species in the last three years.

2) *Retention tree plan:* **To preserve structural diversity and to meet the requirements of the Forest Resource Plan and HCP, a minimum of eight trees/acre have been clumped and scattered throughout the units. Larger edge trees that have been exposed to the wind from past harvests were targeted as they should exhibit more windfirmness. Scattered trees include larger trees that show structural characteristics that are important to wildlife. Retained trees will consist of dominant and co-dominant crown classes. Some of the individually marked trees are large structurally unique trees, which have the characteristics desired for future snag retention. These marked leave trees and leave tree clumps will expedite the development of a more diverse, multi-storied canopy layer in the future stand.**

A total of 735 trees being left throughout sale area. Unit 1 has 218 leave trees marked with blue bands dispersed throughout the unit. Unit 2 has 179 dispersed leave trees and marked in the same manner as Unit 1. Three GTR clumps have been designated within Unit 1 and a total of 286 trees were left in these clumps. Two GTR clumps have been designated within Unit 2 and contain 52 trees total. These areas have been tagged out with " Leave Tree Area" tags.

c. List threatened or endangered *plant* species known to be on or near the site.

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
None Found in Database Search				

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
Our retention tree plan, which is leaving eight wildlife and legacy trees per acre and the riparian buffers left on all streams in and adjacent to the proposal, will enhance diversity on the site. The harvest units will be reforested with a mixture of conifer species including western hemlock, Douglas fir and redcedar all of which are native species to this site.

5. Animal

a. Circle or check any birds animals *or unique habitats* which have been observed on or near the site or are known to be on or near the site:

birds: ✔ hawk, ✔ songbirds, ☐ other:
mammals: ✔ deer, ✔ bear, ✔ beaver, ☐ other:
fish: ☐ bass, ✔ salmon, ✔ trout, ☐ other:

b. List any threatened or endangered species known to be on or near the site *(include federal- and state-listed species).*

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
2	**22601**	**WINTER STEELHEAD**	**THREATENED**	**CANDIDATE**
2	**22601**	**FALL CHINOOK**	**THREATENED**	**CANDIDATE**
2	**22601**	**CHUM**	**THREATENED**	**CANDIDATE**

c. Is the site part of a migration route? If so, explain.
✔ **Pacific flyway** ☐ *Other migration route:* *Explain if any boxes checked:* **The units lie within the Pacific flyway, as does the Hoko watershed, but the units do not offer good habitat for resting of migrating birds.**

d. Proposed measures to preserve or enhance wildlife, if any: **See sect. 3. a. 1) c) for details on riparian protection measures to minimize sedimentation of Hoko River and adjacent habitat streams.**

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.
Diesel powered equipment will be used for road construction, harvesting activities and transportation of manufactured logs.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. **No**

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: **None**

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe. **Risks of wildland fires are always a concern when harvesting timber.**

1) Describe special emergency services that might be required. **Use of wildland fire resources may be used in the event of a fire.**

2) Proposed measures to reduce or control environmental health hazards, if any: **Contract language requires purchaser to provide an on-site pump truck/trailer for basic fire protection.**

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? **None**

2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.
Typically, between the hours of 6:00 a.m. and 6:00 p.m. the noise of road construction, harvesting equipment and log truck traffic will be heard as part of this proposal.

3) Proposed measures to reduce or control noise impacts, if any:
None

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? *(Site includes the complete proposal, e.g. rock pits and access roads.)* **Industrial Forest Lands**

b. Has the site been used for agriculture? If so, describe. **No**

c. Describe any structures on the site. **None**

d. Will any structures be demolished? If so, what? **No**

e. What is the current zoning classification of the site? **Industrial Forest Lands**

f. What is the current comprehensive plan designation of the site? **Industrial Forest Lands**

g. If applicable, what is the current shoreline master program designation of the site? **Not Applicable**

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify. **No**

i. Approximately how many people would reside or work in the completed project? **None**

j. Approximately how many people would the completed project displace? **None**

k. Proposed measures to avoid or reduce displacement impacts, if any: **None**

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: **None**

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
Not Applicable

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
Not Applicable

c. Proposed measures to reduce or control housing impacts, if any: **None**

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed? **Not Applicable**

b. What views in the immediate vicinity would be altered or obstructed?
Views consist of private industrial timberland.

1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
✔ *No* ☐ *Yes, viewing location:*

2) Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?
✔ *No* ☐ *Yes, scenic corridor name:*

3) How will this proposal affect any views described in 1) or 2) above?
Not Applicable

c. Proposed measures to reduce or control aesthetic impacts, if any: **None**

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? **None**

b. Could light or glare from the finished project be a safety hazard or interfere with views? **No**

c. What existing off-site sources of light or glare may affect your proposal? **None**

d. Proposed measures to reduce or control light and glare impacts, if any: **None**

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?
Informal hunting uses are a minor issue due to the locked gate and restricted ATV use on Crown Pacific roads.

b. Would the proposed project displace any existing recreational uses? If so, describe: **No**

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: **None**

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe. **A check of DNR's "TRAX" system indicates there are no known places or objects.**

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site. **None**

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)
None

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.
Access to the proposal from public streets and highways includes the Hoko-Ozette County Road and State Route 112.

1) Is it likely that this proposal will contribute to an <u>existing</u> safety, noise, dust, maintenance, or other transportation impact problem(s)? **No**

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop? **No**

c. How many parking spaces would the completed project have? How many would the project eliminate? **None**

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).
Yes, this proposal will construct new forest management roads as described in question 1.a. above.

1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?
This proposal will have no impact on the overall transportation system.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
No

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.
Approximately 12-15 trips per day during peak harvest activities.

g. Proposed measures to reduce or control transportation impacts, if any: **None**

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe. **No**

b. Proposed measures to reduce or control direct impacts on public services, if any. **None**

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other. **None**
b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. **None**

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: ___**Anette Smith** Date: __**9/21/04**_____

Title: **Tyee Forester 1**